

REMARKS

The present application relates to inbred maize plant and seed PH5FW. Claims 1-34 are pending in the present application. Claims 2, 23-26, 29-32 and 34 have been amended. Claim 18 has been canceled. No new matter has been added by way of amendment. Applicants respectfully request consideration of the claims in view of the following remarks.

Detailed Action

Applicants have amended the specification to include the correct application serial number, the date it was filed, and the U.S. Patent No. of the parent application on page 1, lines 9-12 as requested by the Examiner. No new matter has been added.

Applicants further acknowledge that a proper form 1449 Information Disclosure Statement (IDS) is being submitted herein as requested by the Examiner.

Claim Objections

The Examiner states that "should claims 2 and 3 be found allowable, claims 5 and 6 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof". *See* Office Action, pp. 2-3.

Applicants respectfully traverse this objection. The scope of the claims in claims 2-3 and 5-6 are not the same. Claims 2 and 3 are to a maize plant or maize plant part from the seed having been deposited under ATCC Accession No. PTA-4674. In contrast, claims 5 and 6 are to a maize plant or maize plant part of an F1 hybrid maize seed crossed with a different maize plant. Further, Applicants assert claims 2-3 and 5-6 are in proper dependent form as taught in MPEP § 608.01(n) and 37 C.F.R. § 1.75(c). Moreover, Applicants are aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claims 2-3 and 5-6, were in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicants respectfully request this objection be alleviated in light of the above statements.

Double Patenting

The Examiner rejects claims 1-6, and 13-33 under the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31 of copending U.S.

Patent No. 6,781,042. The Examiner states that although the conflicting claims are not identical, they are not patentably distinct from each other. *See* Office Action, pp. 3-6.

Applicants are herein submitting a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c), which disclaims any term of a patent issuing from this application which would extend beyond the term of copending U.S. Patent No. 6,781,042.

Therefore, Applicants submit that the claims are in proper form for allowance and respectfully request reconsideration and withdrawal of the nonstatutory obviousness-type double patenting rejections.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 2, 24, 26, 33, and 34 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. *See* Office Action, pp. 6-7.

The Examiner states that claim 2 is indefinite in the recitation "F1 hybrid maize seed" and that "[t]here is insufficient antecedent basis for the recitation." Although not acceding to the Examiner's rejection, in an effort to reduce the issues on appeal, Applicants have now amended claim 2 to replace the article "an" with the article "the", thus alleviating this rejection.

Claim 24 is indefinite according to the Examiner for "the article 'a' in the recitation, 'the single locus was stably inserted into a maize genome by transformation'". Although not acceding to the Examiner's rejection, in an effort to reduce the issues on appeal, Applicants have now amended claim 24 to replace the article "a" with the article "the", thus alleviating this rejection.

The Examiner states that claim 26 is indefinite in the recitation "yield enhancement", "improved nutritional quality" and "male sterility and male fertility". Applicants respectfully traverse. "Yield Advantage" is defined on page 23 of the specification as "the yield advantage of variety #1 over variety #2". Therefore yield enhancement would be the improvement of the trait yield over another variety. Applicants assert that genes which increase yield by increasing the plants resistance to disease, herbicides, or insects are within the scope of the claims as presented. The specification teaches multiple ways of introgressing or transforming a maize plant with various genes which confer advantageous traits desired in the plant. *See* specification, pp. 31-48. The specification also teaches many transgenes that could be inserted into the plant of claim 13. *See* specification, pp. 40-48. In addition, see U.S. Patent No. 5,936,145, issued August 10, 1999,

which is prior to the filing date of the instant application. Claim 39 reads as follows: "[t]he single gene conversion of the corn plant of claim 29, where the gene confers enhanced yield stability." Thus, a single gene that confers enhanced yield stability was known in the art prior to the filing date of the instant application. One of skill in the art would recognize that it is common to transform a maize plant with various genes in order to confer desired traits to the maize plant.

In addition, Applicants assert the terms "male sterility" and "male fertility" are also taught in the specification. *See* specification pp. 2-4, 36, and 48. Similarly, "improved nutritional quality" would represent an improvement in the nutritional quality versus another variety as described on pages 35-36 of the specification. Further, single genes that affect nutritional quality are known in the art. Specifically genes for modified fatty acids, decreased phytate content and modified carbohydrate compositions which are disclosed in the specification on p. 47. Applicants respectfully submit that one skilled in the art would thus recognize that claim 26 is adequately defined.

Claim 33 is indefinite according to the Examiner "as the preamble of the claim indicates that the method is for developing a maize plant breeding program using plant breeding techniques...the claim does not indicate when the maize plant is developed". Applicants traverse this rejection. Applicants have obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, regarding claim 33 as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Moreover, Applicants are aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 33, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicants respectfully request this rejection be alleviated in light of the above statements.

Claim 34 is indefinite according to the Examiner for "the recitation, 'the molecular marker profile'" because "there is insufficient antecedent basis for the recitation in the claim". Although not acceding to the Examiner's rejection, in an effort to reduce the issues on appeal, Applicants have now amended claim 34 to replace the article "the" with the article "a", thus alleviating this rejection. Further, Applicants have obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, regarding claim 34 as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Moreover, Applicants

are aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 34, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicants respectfully request this rejection be alleviated in light of the above statements.

In light of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

Rejections Under 35 U.S.C. § 112, First Paragraph

A. Written description regarding Claim 18

Claim 18 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner states "the claim is broadly drawn towards any maize seed produced by growing a hybrid maize plant, wherein the hybrid maize plant was produced by crossing a maize plant having all the morphological and physiological characteristics of maize plant PH5FW with a second maize plant". See Office Action, pp. 8-9.

Although not acceding to the Examiner's rejection, in an effort to expedite prosecution and reduce the issues upon appeal, Applicants have now canceled claim 18, thereby alleviating this rejection.

B. Written description regarding Claims 7-10

Claims 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See Office Action, p. 9.

The Examiner states that claim 7 is "drawn towards an F1 hybrid maize seed comprising an inbred maize plant cell of inbred maize line PH5FW...there is no written description support for such a seed, or plant produced therefrom, in the specification".

Applicants traverse this rejection. Applicants assert there is adequate written description in the specification for "an inbred maize plant cell" on page 36 of the specification:

As used herein, the term plant includes plant cells, plant protoplasts, plant cell tissue cultures from which maize plants can be regenerated, plant calli, plant clumps, and plant cells that are intact in plants or parts of plants, such as embryos, pollen, ovules, seeds, flowers, kernels, ears, cobs, leaves, husks, stalks, roots, root tips, anthers, silk and the like. Specification, p. 36.

Applicants assert that the use of this terminology would be well understood to one ordinarily skilled in the art and is not new matter. Furthermore, Applicants have obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Moreover, Applicants are aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 7, were in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicants respectfully request this rejection be alleviated in light of the above statements.

One skilled in the art would thus recognize that Applicants have fully described and fully satisfied the legal standards of written description for claims 7-10 as of the filing date of the application. Accordingly, Applicants respectfully request reconsideration and withdrawal of the written description rejections under 35 U.S.C. §112, first paragraph.

C. Enablement regarding Claims 7-10

Claims 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. *See* Office Action, pp. 9-10.

The Examiner states that claim 7 is not enabled. Applicants traverse this rejection. Applicants assert that claim 7 is adequately described and further enabled as evidenced by the statements described *supra*. Further, Applicants are aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 7, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Furthermore, Applicants have obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases.

Applicants further assert that dependent claims 8-10 are also adequately described and enabled. The Examiner does not provide explanation as to why these claims are not enabled. Nevertheless, Applicants maintain the arguments described *supra* also apply to dependent claims 8-10. Moreover, Applicants are aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claims 8-10, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicants respectfully request this rejection be alleviated in light of the above statements.

Accordingly, Applicants submit that claims 7-10 are fully enabled and have fully satisfied the legal standards for enablement. Applicants respectfully request reconsideration and withdrawal of the enablement rejections under 35 U.S.C. § 112, first paragraph.

Rejections Under 35 U.S.C. §§ 102(b)/103(a)

Claim 18 is rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Johnson (U.S. Patent No. 5,859,355). The Examiner states that "seed may have been produced from a method different from those of the instantly claimed seed. However the instantly claimed products do not appear to differ from the products taught by the reference". See Office Action, pp. 10-11.

Although not acceding to the Examiner's rejection, in an effort to expedite prosecution, claim 18 has been canceled, thus alleviating this rejection. Applicants respectfully request the Examiner withdraw the rejections to claim 18 under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) as obvious over Johnson (U.S. Patent No. 5,859,355).

Request for Information under 37 C.F.R. § 1.105

The Examiner has made a Request for Information under 37 C.F.R. § 1.105. The Examiner states the requested information is "required to make a meaningful and complete search of the prior art". See Office Action—Request for Information Under 37 C.F.R. § 1.105, pp. 13-15.

Applicants provide answers to each of the Examiner's interrogatories discussed *infra*.

The Examiner begins by asking firstly, what were the original parental maize lines used to produce maize inbred line PH5FW? Please supply information pertaining to the lineage of the

original parental lines back to any publicly available varieties. D171 and D149. Information pertaining to the lineage of the original parental lines is available within the PVP Application No. 200200177, attached as Appendix 1.

Secondly, what method and steps were used to produce maize inbred line PH5FW? Pedigree selection method produced by selfing and selection for 10 generations.

Third, have any of said parental maize lines or progeny therefrom been disclosed or made publicly available?

a. The parental maize line D171 was not previously disclosed or made publicly available by Applicants. The parental maize line D149 was not previously disclosed or made publicly available by Applicants.

b. No other progeny of the parental cross D171/D149 was previously publicly disclosed or made publicly available by Applicants prior to the earliest priority date.

Fourth, were any other maize lines produced by said method using said original parental maize lines, and if so, have said produced maize lines been publicly available or sold? If so, under what designation/denomination and under what conditions were said other maize lines disclosed or made publicly available? No other maize line using the same F1 cross has been produced by said method using said original parental maize lines at or before the time of filing of the instant application by Applicants.

In light of the above remarks, Applicants respectfully request reconsideration and compliance with the interrogatories under the Request for Information under 37 C.F.R. § 1.105.

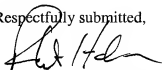
Conclusion

In conclusion, Applicants submit in light of the above amendments and remarks, the claims as amended are in a condition for allowance, and reconsideration is respectfully requested. If it is felt that it would aid in prosecution, the Examiner is invited to contact the undersigned at the number indicated to discuss any outstanding issues.

Please consider this a one month extension of time from January 2, 2007 to February 2, 2007, under the provision of 37 C.F.R. § 1.136(a) and charge Deposit Account No. 26-0084 for the amount of \$120.00. No other fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any fees inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



ROBERT A. HODGSON, Reg. No. 56,375
McKEE, VOORHEES & SEASE, P.L.C.
801 Grand Avenue, Suite 3200
Des Moines, Iowa 50309-2721
Phone No: (515) 288-3667
Fax No: (515) 288-1338
CUSTOMER NO: 27142

- RAH/LATA/bjh -

Attorneys of Record